

**Virginia Cave Board
Cove Ridge Center, Natural Tunnel State Park
Duffield, Virginia
Friday, November 10, 2017**

TIME AND PLACE

The meeting of the Virginia Cave Board convened at 7:00 p.m. on Friday, November 10, 2017 at the Cove Ridge Center at Natural Tunnel State Park in Duffield, Virginia.

MEMBERS PRESENT

Steve Lindeman, Chairman	Rick Lambert
David Ek	Janet Tinkham
Anthony R. Bessette	Meredith Hall Weberg
John T. Haynes	

MEMBERS ABSENT

Robert K. Denton, Jr.	Marian McConnell
Dr. Daniel H. Doctor, Vice Chairman	Roger W. Kirchen
John H.H. Graves	

DCR STAFF PRESENT

Rochelle Altholz	Tom Malabad
Rob Evans	Wil Orndorff
Michael Fletcher	

ESTABLISHMENT OF A QUORUM

With seven (7) members present, a quorum was established.

CALL TO ORDER

Chairman Lindeman called the meeting to order at 7:00 p.m.

INTRODUCTIONS AND ANNOUNCEMENTS

Chairman Lindeman welcomed members to Southwest Virginia and Natural Tunnel State Park. He declared a quorum present.

Mr. Lindeman welcomed Anthony Bessette to the Board.

ELECTION OF OFFICERS

The following slate of officers was put forward. There were no other nominations.

Steve Lindeman, Chairman
Dan Doctor, Vice Chairman
Marian McConnell, Recording Secretary

BOARD ACTION

Ms. Weberg moved that the slate of officers be approved as submitted. Mr. Bessette seconded and the motion carried unanimously.

TREASURER'S REPORT

Mr. Evans reviewed the treasurer's report. Total disbursements since FY2015 have been \$3,297. There are no funds current in the account and the balance is \$0.00.

Ms. Weberg asked that staff provide the exact cost of the last newsletter. She advised that she will pursue contributions to cover the next printing.

It was suggested that perhaps the Board request funding to cover two or three cycles of printing of the newsletter.

Deputy Director Altholz reminded the Board that the authority to request funds must be approved by the Governor. Currently the Board has approval from Governor McAuliffe. DCR will facilitate the request to the next administration.

APPROVAL OF MINUTES FROM JULY 29, 2017

Mr. Fletcher noted that Mr. Lambert was listed as present when he was not at the July meeting.

BOARD ACTION

Ms. Weberg moved that the minutes of the July 29, 2017 meeting of the Virginia Cave Board be approved as amended. Mr. Lambert seconded and the motion carried unanimously.

DCR KARST PROGRAM UPDATE

Mr. Orndorff noted the following with regard to the karst program.

- Milestones
 - Beetle report complete
 - Attendance and presentation at National Cave and Karst Management Symposium
 - Dye trace study for MVP (supplemental) completed (with addendum)
 - Submission of proposal to CCV with Dr. Karen Ober for description of ~20 new cave beetle species
- In preparation
 - Paper on Madison Cave Isopod habitat hydrology and side occupancy
 - Paper on hydrology of the Cedars area of Lee County and the Rye Cove area of Scott County
- Staffing: Katarina Kosic Ficco (wage position) on leave of absence until summer, 2018 to complete academic work.

Mr. Orndorff shared with the Board the presentation he gave, along with Tom Malabad and Katarina Kotic Ficco at the National Cave and Karst Management Symposium in October 2017.

Karst considerations in the siting of interstate utility corridors: examples from two major natural gas transmission pipelines proposed to cross western Virginia

The following were noted in the presentation:

- The two projects were announced in 2014
 - 42" diameter, up to 140 PSI natural gas transmission lines
 - Built to transport Marcellus/Utica shale gas to major east coast transmission lines
 - For compliance with the Obama Administration's Clean Power Plan
 - Includes spur to planned compressed natural gas (CNG) terminal for export
 - Each crosses the karst of the Appalachian Mountains
- The permitting process
 - Federal Energy Regulatory Commission (FERC)
 - Determination of need
 - Designation and approval of route through NEPA process
 - State and Federal Water Quality Permits (e.g. Sect. 401 Clean Water Act) – mostly through the Virginia Department of Environmental Quality
- Virginia Natural Heritage Program coordinates state environmental data
 - Conservation sites representing
 - Threatened and endangered species
 - 6 bat species (4 federally listed, 2 state listed) – 5 on pipelines
 - 7 cave invertebrates (2 federally listed, 5 state listed)
 - Rare plants, animals, and natural communities
 - 100+ rare cave invertebrates plus 2 more bat species
 - State significant caves
 - Geospatial Data for Potential Habitats
 - All caves and karst areas in proximity to projects
 - Karst hydrology database
- The Virginia Cave Board
 - Established by the Virginia Cave Protection Act (1979)
 - An independent board with in DCR, appointed by the Governor of Virginia
 - Provides expert guidance to agencies, citizens, businesses, and NGOs in Virginia on cave and karst issues
 - Maintains list of Significant Caves in cooperation with the Virginia Speleological Survey
- The state of affairs as of 10/19/2017
 - The projects were certified by FERC 10/13/2017
 - DEQ Section 401 CWA permits in process
 - DCR and GeoConcepts performing dye tracing along poorly delineated portions of routes pursuant to emergency response planning
 - State Water Control Board hearings in December

Mr. Orndorff introduced Mr. Tom Malabad, Karst Protection Specialist. Mr. Malabad gave a presentation regarding rare cave beetles in Virginia.

Current status of 17 rare cave beetles of the genus Pseudanophthalmus in Virginia.

- Background
 - On April 20, 2010 the Center for Biological Diversity submitted to the United States Secretary of the Interior's "Petition to list 404 Aquatic, Riparian, and Wetland Species from the Southeastern United States as Threatened or Endangered under the Endangered Species Act."
 - Included in this petition were 17 rare cave-limited beetles of the genus *Pseudanophthalmus* known from only 30 caves in Virginia.
 - Before this study, in Virginia 8 species were known from only a single cave, and no species from more than four caves. All of these cave beetles have very restricted geographic ranges located in the karst regions of western Virginia. The ranges of 2 species cross into other states.
 - Virginia is home to 31 described *Pseudanophthalmus* species and sixteen or more undescribed species. All of the beetles of this genus from Virginia are cave-limited troglobionts.
 - Under a cooperative agreement with the U.S. Fish and Wildlife Service, Virginia Department of Conservation and Recreation Division of Natural Heritage staff are performing status assessments of 17 of Virginia's rarest cave beetles that were listed in the Center for Biodiversity's multispecies listing petition.

Mr. Malabad noted that most of these species have not been collected in years. He gave an overview of the 17 species including their current known locations and perceived threats.

LAND CONSERVATION UPDATE

The Nature Conservancy

Chairman Lindeman reported that work continues with regard to properties in Lee County including the Russell Sawmill property which contains Thompson Cedar Cave. The current focus is on the area of The Cedars.

Work continues toward the development of Clinch River State Park. Three sites are currently under consideration for anchor sites that will provide river access. TNC has purchased two sites in Russell County and work continues in Scott and Tazewell Counties.

TNC receive a grant from the Tennessee Valley Authority to work on more access points to the Clinch River.

TNC is also preparing and submitting comments to FERC regarding proposals for the pipelines to cross some preserved lands.

Department of Conservation and Recreation

Mr. Evans noted that DCR is still working on 3-4 projects with regards to the Cedars.

The Virginia Land Conservation Foundation has been advising regarding two grant settlements. Those settlements are the DuPont Settlement, which addressed the South River watershed in the Shenandoah Valley and the Skiffes Creek Settlement which provides for mitigation due to a proposed power line crossing the James River near the Jamestown Settlement.

NEW BUSINESS

Mr. Haynes reported that he and Dr. Doctor had attended the hearings on the proposed pipelines in Harrisonburg in August 2017.

Mr. Lambert noted that he was asked by the Cowpasture River Association to write an article regarding conservation boundaries as they pertain to karst features, sinkholes, sinking streams and cave entrances. Mr. Haynes suggested that this could be a topic addressed at the Karst Symposium and Sinkhole Conference.

Mr. Orndorff addressed the Board regarding state government resources dedicated to addressing karst issues and the need for additional guidance and leadership by the Cave Board.

- Issues Raised
 - Structural Stability
 - Discharge of contaminants and sediment to karst aquifers
 - Frac-out during Horizontal Directional Drilling
 - Induced subsidence by impoundment of Hydrostatic test waters
 - Trench collapse
 - ROW maintenance
- Karst data needs not being met
 - Inventory and characterization of major karst springs
 - Delineation of karst groundwater basins using dye tracing and other techniques
 - Database of karst-related subsidence (sinkhole formation) and of Class 5 injection wells that are improved sinkholes/any stormwater discharge to karst systems.
 - Development of a detailed, digital karst map of Virginia – current map is based on state geology map, and include geological units that are only partially karst.
 - Characterization and delineation of surface karst landforms using LIDAR and other remote sensing techniques

Mr. Orndorff suggested that the Virginia Cave Board consider producing the following:

- Assessment of state resources devoted to karst-related issues
- Assessment of existing regulations addressing karst issues
- Identification of Resource and Regulatory gaps
- Prioritized recommendations for actions to solve the problem

Chairman Lindeman thanked Mr. Orndorff for the presentation and suggested that the Board should move forward with this effort. Members present concurred.

Chairman Lindeman asked Mr. Fletcher to forward Mr. Orndorff's presentation to the Board and noted that this should be an item for discussion at the next meeting.

OLD BUSINESS

Virginia Cave Owners' Newsletter

Ms. Weberg advised that the target date for the next newsletter publication was February 28, 2018 in advance of Virginia Cave Week. She asked that articles be submitted to her by December 1.

Articles will include:

- Chairman's Message
- An ongoing sinkhole cleanup project
- Millipede petition
- Sinkhole insurance

Virginia Cave Week

Ms. Tinkham noted that Virginia Cave Week will be April 22-28, 2018. The theme will be the Virginia Cave and Karst Trail.

Planning is underway for a Cave and Karst Trail brochure. A passport will be developed to encourage visitors to the sites listed.

Ms. Tinkham requested that members volunteer at one of the sites and assist with reaching out to the caving community to find other volunteers.

DCR will coordinate a press release and will work with the Governor's office to proclaim Virginia Cave Week.

Virginia Karst Trail and Signage

Ms. Weberg noted that working with VDOT to post signs would be cost prohibitive. She advised that she would determine the number of signs needed and work with DCR to get those printed through the sign shop.

Appalachian Karst Symposium 3 and Sinkhole Conference

Chairman Lindeman noted that Dr. Doctor was unable to attend the meeting but had sent an update regarding the Karst Symposium and Sinkhole Conference. That email was forwarded to Board members.

Mr. Orndorff advised that Dr. Doctor had relayed that the pressing need was for an associate editor to review papers that were submitted.

2019 National Cave and Karst Management Symposium

Mr. Orndorff reported that the 2019 National Cave and Karst Management Symposium will be held in Bristol, Virginia in October, 2019. He suggested that the Virginia Cave Board agreed to be a sponsor of the Symposium.

BOARD ACTION

Mr. Haynes moved that the Virginia Cave Board agree to sponsor the 2019 National Cave and Karst Management Symposium and that the Board work with DCR staff to provide organizational help for the conference. Mr. Lambert seconded and the motion carried.

Mr. Ek noted that the minutes of the July meeting called for an update regarding the Staunton Cavern.

Mr. Lambert reported that he had spoken with the City of Staunton regarding the cave. Prior reports from 1995 indicate that the cave was very important for karst education. The cave is significant hydrologically and biologically. Mr. Lambert agreed to speak again with the City Manager to pursue opening the cave.

PUBLIC COMMENT

There was no public comment.

DATE FOR NEXT MEETING

Chairman Lindeman asked staff to poll the Board regarding meeting dates in late February, 2018.

ADJOURN

There was no further business and the meeting adjourned.

Respectfully submitted,

Steve Lindeman
Chair

Marian McConnell
Recording Secretary